utilising a wider resources base (as it can be produced from gas, coal and biomass) while ethanol could also be considered if research and development in cellulosic conversion to ethanol or other bio-solar technologies are successful and lead to vastly increased quantities of ethanol. The Department of Non-Conventional Energy Sources is spearheading R&D in all these areas. As a result, the technology for the use of methanol in engines to replace diesel upto 15 to 20 per cent has been developed in co-operation with the Indian Institute of Petroleum, Dehradun. The introduction of methanol also results in marked improvement in the quality of exhaust due to significant reduction in smoke and noxious oxides.

The Department of Non-Conventional Energy Sources followed this up by a R&D project for field trials. Under this programme, ten Delhi Transport Corporation (DTC) buses are now running in Delhi in different routes with methanol/diesel fuel, so that feed back data of the performace of the vehicles & engines would be obtained under actual commuting conditions. The buses have already covered 4,00,000 kms. So far they have not faced any operational difficulty on account of methanol introduction. The trial also confirms the expected improvement in the quality of exhaust from the environmental point of view.

On ethanol, apart from demonstrating that ethanol can be used as a fuel in engines, R&D has resulted in the development of processes for efficient conversion of cellulosic material to ethanol. A pilot plant sponsored by Department of Non-Conventional Energy Sources is under construction at the IIT, Delhi campus to develop these processes towards on industrial scale.

Use of lead in petrol

1935. SHRI RAM AWADHESH SINGH: Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

(a) whether Government are aware that India is using 3-4 times more lead in petrol than in other countries, leading to heavy pollution;

(b) whether research work undertaken by Goveernment on the subject has been completed, if so, with what results;

(c) whether Government are aware that EEC, Brazil Sweden and several other countries have stopped the use of tetra-lead and thereby reduced pollution greatly; and

(d) whether Government will ban the use of lead in petrol?

THE MINISTER OF STATE OF THE MINISTRY OF PETROLEUM AND NATURAL GAS (SHRI BRAHM DUTT): (a) to (d) The existing B.I.S. specifications or lead content in petrol in India is 0.56 gms/litre (maximum). The average lead content in 87 octane petrol presently produced in the refineries in the country varies from 0.10 to 0.45 gms|litre.

In some of the developed countries, the lead content in gasoline (Petrol) is limited to a maximum of 0.15 gms|litre. Some of them also market a separate grade of lead-free gasoline.

Based on studies undertaken in the country in this area, the Government has initiated action to bring down the lead content of petrol in India to 0.15 gms|litre maximum by installining additional facilities in the refineries, as required.

STD facility in Rajasthan

1936. SHRI SANTOSH BAGRODIA: Will the Minister of COMMUNICATIONS be pleased to state:

(a) whether Government have finalised any plan to provide STD facility in more cities in the country during the years 1988-89 and 1989-90; and

(b) if so, the names of the cities which will be covered in Rajasthan during the above period?

THE MINISTER OF STATE IN THE MINISTRY OF COMMUNICATIONS (SHRI GIRDHAR GOMANGO): (a) and